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COLMAN'S RURAL WORLD

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PRESERVING MEADOWS.

This is done more effectually by giving a
coat of manure immediately after the crop is re-
moved, as the removal of the crop exposes the
roots of the grass to the scorching rays of the
sun; and as they are not used to this heat,
having been protected by the grass, they feel
the effect the more readily. Where there is
gravel or sand, and the crop is cut short, leav-
ing the roots directly exposed, the hurt will ex-
tend not only to the injury of the crop which
is to follow, but to the entire loss of it. The
sun will scorch the sod until it becomes red
and parched. This is so to a greater or less
extent in all seasons, though more in case of
drouth and severe heat. Where there is a coat
of bottom grass, or the soil is a light-colored
clay, the evil is less. In such a case, if the
season is moist and but moderately warm,
there is no harm at all. But there are excep-
tional cases, take them throughout the country.
We know meadows that are left exposed to the

rays of the sun with the stubble cut close, and
yet no harm results; and these meadows have
lain, and have been treated in this way, with
no top dressing or fertilizers, from five to eight
years, and each year improves the crop. The
secret is, the grass is permitted to grow without
being fed off, forming a thick mat of protection;
and the soil is a light colored drift with a large
preponderance of clay. Meadows side by side of
these, with the after math fed off, are failures.

Thus we see what a protection grass itself is.
So with manure, to a greater or less extent, de-
pending upon the nature of the manure whether
long or short, whether pure manure or com-
post, and how applied. But any manure finely
and evenly applied will protect the roots of
grass from the sun, and more or less from the
frost. Let the manure be immediately applied
as soon as the hay is removed, and let it be
evenly spread and pulverized; this is import-
ant, this spreading evenly and finely. When
this is properly done, your meadow is as safe
as if locked away from the weather. This, ex-
perience has, for many years, decided. The
sun is ineffectual for evil; so are the dry winds;
so are the rains in their washing effect; and
the frost and cold sweeping winds of winter are
kept at bay. For there is not only the manure
as it acts as protection, but the impetus it
gives to the grass, growing a mat which is
woven with the manure, and forms a barrier
which is a security against all the vicissitudes
of the elements. It is a warm covering—that
is, comparatively warm—and that is all that is
needed. The next year will show a crop un-
rivalled.

We prefer manure to trusting the young grass,
which it will take some time to grow—and the
hurt to the roots usually takes place soon after
the removal of the crop, as then the rays of
the sun are direct. Manure will remedy this:
it is the successful practice.

RECIPE TO CLEANSE WOOL.—Hunt Brothers
of the "North Bloomfield Custom Woolen Mill,"
N. Y., give the following recipe for cleansing
wool:

To two pailsful of water add a quart of soft
soap and a half a pint of common salt. Heat
from 150 deg. to 180.—or a little warmer than

the hand can bear. Put in all the wool that
will stir conveniently, and let it remain fifteen
minutes, moving it in the kettle occasionally.
Then take it out, let it drain, return the drained
liquor to the kettle and add all the water needed.
Repeat the process and occasionally add a little
soap and salt. After the wool is sufficiently
drained, simply rinse it out well in cold water
and you will then have it white and soft. Nev-
er let wool boil in the liquor as that will fix the
gum, render the fiber stiff and gray, and unfit
it to make soft, flexible yarn. Fine wool needs
more time in the kettle than coarse. Taggings
may be cleansed in the same manner, by clip-
ping of all the hard matter that cannot read-
ily be compressed between the thumb and finger.

—[Rural New Yorker.]

Written for Colman's Rural World.

THE APIARY.

BY H. A. KING, NEVADA, OHIO.

May and June are the great swarming months
and it now becomes the duty of the bee-keeper
to look to the safety of the old stocks, which
have cast swarms, if he would insure success.
A stock of bees should not cast more than one
or two swarms in one season, because there
will be no eggs laid in such stocks for two or
three weeks after the departure of the old
queen with the first swarm, until the young
queens hatch and one becomes fertile—and her
progeny will not begin to hatch for three weeks
more—so that the stock will be greatly reduced
in numbers, if allowed to cast three or four
swarms.

As there are no safe and simple means of
preventing over-swarming, the best way to man-
age two or three swarms is, to destroy the
queen and return the swarm to the parent
stock.

When the old queen leaves the hive with
the first swarm, there are usually from five to
ten queen cells sealed over, which usually hatch
on the eighth or ninth day after the first swarm
is cast; and if the stock be strong in numbers
and the flowers yield abundantly, the worker
bees decide to cast a second swarm and cluster-
ing around the queen cells prevent the queen
first hatching from destroying her rivals. At
this she becomes uneasy, running over the
combs until the commotion results in her issue
with a second swarm. Like causes produce in
like manner third or fourth swarms, which of-

ten so weaken the old stock that, having no more brood to hatch, they fall a prey to the moth miller before the progeny of the young queen hatch in sufficient numbers to cover the combs. Hence, after-swarms should be returned to the parent stock, which will enable them to bid defiance to moth millers.

Again, many bee-keepers use hives all of one color, and set them so near together on a plank that the young queen, when she returns from her "bridal tour" to meet the drones, often enters the wrong hive and is slain as an intruder, which leaves the hive, to which she belongs, queenless, and with no eggs from which to rear another; hence, it will decrease in numbers, until a part of the combs are left uncovered and unprotected, where the moths are sure to gain a foothold, and the "unlucky" bee-keeper reiterates the cry, "the moth miller has destroyed my bees"—when the unnecessary loss of the queen was, as usual, the real cause.

Use hives of various colors, setting them a few feet apart; and, as a good hive will last many years, hive your bees in the best movable comb hives, and you can open the stock, introduce an Italian queen, or remove honey or litter at any time. What is worth doing, is worth doing well.

Gleanings from our Exchanges.

The *Gardener's Monthly* for June has an interesting article on tendrill motion, which opens up a new sphere for investigation into the phenomena of vegetable life, and perhaps will be found to perform an important part in the inquiries into those yet hidden causes of disease in plants. While this "tendrill motion" may be one of these vital forces, we doubt if the diseased action will be found traceable to one single universal cause, but to the combination of several.

The *Farmer*, Richmond, Va., has an exhaustive article on the potato, by S. B. French. He says "the culture of the potato is less expensive than that of any other root, and about of equal cost with corn, while its yield will be more remunerating as a money crop. An acre of corn, as a general average in Virginia, may be assumed to yield five barrels, which, at five dollars per barrel, is twenty-five dollars—the fodder and shucks may be set against the labor. This is a liberal statement for the corn. The same acre of land, treated as before set forth, yields very poorly—it produces only eighty bushels of merchantable tubers. At eighty cents a bushel, the acre in potatoes turns out sixty-four dollars against twenty-five dollars in corn. The small potatoes will pay for the labor. Eighty bushels per acre is a very small crop, and eighty cents per bushel much below the average price."

The *Horticulturist* has a good article on "propagating plants by cuttings of ripe wood," in which the writer says, "Planting the cuttings too deep should be avoided, as the farther from the surface they are, the less solar heat they will receive; and this is necessary to insure rapid growth after they become rooted. If the cuttings are short, plant perpendicular; if long, they may be put at an angle.

"In growing cuttings of the ripe wood of evergreen plants, the same plan should be adopted as with deciduous plants, except that the cuttings must not be entirely excluded from the light or wholly buried in the soil; for, in making them, the leaves are left on that part of the cutting which remains above ground. If they were covered entirely with earth, they would soon decay. The leaves of our hardy evergreen plants are covered with a very compact epidermis, which does not allow them to exhale or inhale moisture very rapidly when in a dormant state."

THE BARBERRY.

This is now attracting much attention as a hedge plant, and we see in some of our exchanges it is asked, if it can be propagated by cuttings.

We have been as successful with the cuttings of the barberry as with the gooseberry; it roots easily—but we prefer seedling plants.

In our soil, the plant is a very rampant grower, throwing up very rank suckers that tend to deform the hedge, and require care to control. It suckers quite considerably, which is somewhat of an objection to it. It is a beautiful shrub in foliage, flower and fruit, and stands our climate well. We have plants ten years old, and have watched a hedge for some fifteen years, and think favorably of it. It is easily raised from seed planted in the fall, and will be found to do well on some of our poor ridges, where the osage orange may not do. A.E.

[Written for Colman's Rural World.]

MILK SICKNESS.

In June 1st *Rural World* in an article on the above subject, the author "C.S.", after summing up the evidence brought forward to prove that this disease is caused by the *Eupatorium ageratooides*, says: "But the main question remains. If this plant is the real cause, how comes it that the disease is confined to such restricted localities, when this plant is of extensive, and indeed general distribution."

In answer, I would say: In this part of the county, two miles from Hillsboro, we are not troubled with the disease, and specimens of the White Snake Root are, comparatively speaking rarely to be found; whereas, in the milk-sick district, ten miles east of this, it is very abundant. In the fall of the year when our prairie grass has become dried and scorched by the sun, so as to be utterly devoid of any nourishing properties, cattle are forced to obtain their food in the timber; and as the amount of grass is quite limited there, they must make up the deficiency with weeds, leaves of trees, &c.; then it is that milk sickness makes its appearance—as the cattle, from hunger, and not inclination, eat this weed. This, at least, is my hypothesis.

That the plant is to be found in the Eastern States, is true: but I would ask "C.S." if he ever knew an Eastern farmer to force his cattle—for the want of better pasture—to browse on weeds and leaves of trees?

Two years ago was a very dry year at the East, and in Massachusetts I met farmers who

told me they were obliged then (September), and had, during the summer, fed all their stock half rations of meal, roots, &c., as their pastures were so short that cattle could not be kept in condition without some outside assistance. With us the most of farmers seem to think that the Almighty should provide for their stock seven months in the year, and if He does not do so, they are not responsible.

There could be isolated cases of this disease at the East, and we be none the wiser; for it is hardly to be supposed that any farmer would be able to recognize it.

Any substance that will produce the characteristic symptoms of this disease (and the White Snake Root does this), must be one of the causes; and until another has been discovered, has a right to be considered as the cause.

I care not who may have first discovered the cause. Mr. Jerry was the first who—as we might say—by experimenting himself, proved and made public the result—that *Eupatorium ageratooides* would produce symptoms assimilating that of milk sickness; and, if any one, he should receive the reward. AMOS SAWYER.

Hillsboro, Ill., June 10.

[Written for Colman's Rural World.]

Crop Prospects in Cape Girardeau and Perry Counties, Mo.

The early Red Wheat generally is in full bloom and very promising. This variety ripens about the same time that barley does. May wheat also promising, but not as good as early Red. White wheat badly injured by the fly; it looked very good all winter and spring, until it began to shoot up, then it turned yellow and got thinner on the ground, and looks as if it would not make half a crop.

Oats are quite small for the season; the dry and cold weather has kept it from growing—it has, however, a good appearance.

Corn is not quite all planted; the first planted is quite yellow, owing to the dry and cold season. We have fires every morning and evening.

Notwithstanding the severe frost in the early part of the month, the prospect for fruit is good of all kinds—pears, apples, peaches and plums. Grapes were mostly killed by frost.

Where can I get a good treatise on sheep? When is the best time to plant fruit trees—in the fall or spring? H. B.

Apple Creek, Mo., May 26.

REPLY—"Randall's Practical Shepherd" is the best work. It treats on breeding, management and diseases of sheep. It is published East.

Fall, if favorable weather ensues, is a better time to plant trees than spring. Though both seasons are good, if the weather is favorable.—Trees planted in the fall or open weather during winter are likely to make a better start in the spring. The past spring being unusually backward prevented tree planting to a very large extent.

"SIGNS OF PROSPERITY."

Where spades grow bright, and idle swords grow dull;
Where jails are empty, and where barns are full;
Where church-paths are with frequent feet outworn;
Law courtyards weedy, silent and forlorn;
Where doctors foot it, and where farmers ride;
Where age abounds, and youth is multiplied;
Where these signs are, they clearly indicate
A happy people and well-governed State.

Season's Influence—the Cutting of Timber for Artificial Preparation.

"From the first of September, in many countries; but in general from the 15th of that month onward, the vegetable activity diminishes, the leaf changes color and soon falls. At this period the sap becomes thinner, circulates with more facility, and yields so much the more readily to the antiseptic liquid.

Trees felled in Sept., Oct. and Nov. may await preparation for a longer time in proportion as they are later cut. The more advanced the season, the less the tendency of the sap to congregate and obstruct the vessels of the cellular tissue. In trees felled in October, this condition scarcely supervenes before the end of November, while in those severed in January, February and March—provided the boughs be left entire—the fluidity of the sap continues till the end of May.

In general, the sap of standing trees attains its highest degree of tenacity from the middle of April to the beginning of June; trees felled at this season, which is the most unfavorable, admit of only difficult and imperfect preparation. During the following months of June, July and August, the process should be applied within eight days from the felling of the tree; hence the dryness, which promotes coagulation in the still otherwise tenacious sap, will tend to embarrass the operation and in some cases render it very imperfect. As a general rule, it may be assumed that the most favorable epoch for the impregnation of wood, is that in which the felling is generally considered advantageous."—*Smithsonian Report*, '64.

BOYS DRIVING COWS.

Boys are bad cow drivers. There is a propensity in each boy to run a cow—and in order to do it, to pound her, or stone her; at least all boys that we have ever seen tested have done so.

We need not say here, that it is bad to run a milch cow, especially in the full milking time in summer, when the air is hot and the animal is indisposed to much exertion. But it is done notwithstanding the caution against it. Where an unobserved opportunity offers, the itching propensity will be gratified. Rather have a well-trained dog—he is more reasonable than the boy.

Just now a boy and cow came thrashing along, the mud flying. The boy, a rather good boy, kept pounding her, as if bound to hurt her, which he did. He was told frequently not to do so; but somehow he always, or at least very often (we do not see him the whole course), drives on a run, a full jump, the poor cow going on uncomplainingly. This is in broad daylight, through the streets of the village.

It will not do to trust these boys—to trust a boy. Dispense with their help entirely; with the girls, also—they are little better.

There is no one so good as the man, if he has patience. If not, he may break a leg or cause a rupture: his blows tell. Such men are not fit to possess cows, and we fear little else.—A leg broke will lose you a cow, and the worth of a cow will almost hire a man (and stipulate

him to treat the cows well) during the summer; it will quite during May and June—the most critical time.

But keep the boys away from cattle—flogging will do no good. If farmers knew how much less butter and cheese are made by this course of the boys, they would banish the pest from the farm. We like boys—but we do not like to see too many of their capers.

[Written for Colman's Rural World.]

Management of the Honey Bee.

As the object of these articles is to say something practical, and that will be of profit to the bee-keeper, if followed, I devote this chapter to the

ITALIAN BEE.

The Italian is of a striped golden color, a native of the Alps of Switzerland and Northern Italy. It is much hardier, energetic in its labors, and prolific than the black bee—all very valuable characteristics. Italian bees will store large quantities of surplus honey in seasons when the natives will hardly make a living. And as their queens are more prolific, they keep the stock stronger in numbers, causing the colony to winter better, enter upon its spring labors with better prospects, swarm earlier, and throw off larger swarms.

Every keeper of bees who would derive the greatest pleasure and profit from that source, should keep the Italian bee. If he is incredulous, let him obtain a single colony, and satisfy himself by experiment. He need not buy a full stock, but can obtain a fertile queen that is known to be pure, and introduce her into any colony of native bees, by first removing the black queen. In the common hive this may be done by driving out the bees and catching her as she attempts to enter again. The colony should be left queenless over-night; then introduce the Italian queen in a wire cage, between two combs, where she can help herself to honey, or between any combs where the bees cluster, if you give her a little honey occasionally.—Notice whether the bees cluster on the cage and feed her; if so, she will need no further care from you, except to liberate her, which must be done with care, so as not to enrage the bees, after the queen has been caged about two days. In movable comb hives, remove the queen by lifting out the frames till you find her: place the cage containing the Italian queen on the frames over where the bees cluster, or between two frames where there is honey. The Italian queen will change the whole colony to her own kind in three or four months.

As to pure Italian queens, they can be obtained of any breeders who make a business of rearing them for sale, and who are responsible.

I notice in a late number of the *Rural American* that the editor cautions his readers against purchasing from anybody, except those who breed on "an island" several miles distant from the main land, as the Italian bees cannot be bred pure in any other place. This is simply nonsense. If they cannot be bred pure elsewhere, what is the need of bee-keepers all over the country purchasing a queen or two, from

which to Italianize their stocks—they cannot get any pure queens from the original one, but must go to "the island" again to obtain a queen every time they have a swarm. At some future time I shall perhaps give instructions how to Italianize a large number of colonies from a single pure queen, and how to insure their purity.

Queens may be introduced at any time during the warm weather; but if in the swarming time, care must be had lest the Italian queen swarm out. If her wings be clipped, there is no danger of her going far. She will crawl out on the ground, and must be caught and secured till the bees return, then put in the hive again. If the queen cells are all cut out a week after liberating the queen, there will be but little danger of her going off, unless the colony is very strong. W. C. CONDIT.

Osage Orange Hedge-Growing.

BY W. H. MANN.

It is a well-known fact, that a large majority of those who have purchased Hedge Plants, have failed in growing Live Fences. Some have failed from ignorance—not having been furnished with proper instructions; while some have failed from mere negligence, not having carried out the instructions furnished. It is the object of this article to supply the wants of the former, and to induce the latter to make a proper use of the means in their possession. It would be superfluous, at this late date, to discuss the necessity and importance of live fencing in the West; all admit that it is the only practical mode of enclosing our extensive prairies.

Farmers, who are such practically, and who live on their farms, can grow their own hedge much cheaper than Hedge Companies, who have to travel from farm to farm. But if you prefer to have your hedge grown by others, be very careful with whom you contract, as some of those self-styled Hedge Companies have no practical knowledge of hedge growing; neither are they responsible, as many who have been "taken in" can testify. A perfect stand the first season, is the important point. This obtained, you will have but few difficulties to contend with, unless you live among Gophers.

Keeping Plants Over Winter.—Select a dry and rolling piece of ground. Open a trench, spade deep and ten or twelve feet long. Put in a layer of plants two or three inches thick, and at an angle of about 50 degrees. Cover by taking a spade of dirt from the front, at the same time opening a trench for the next layer, and pressing the dirt firmly upon each layer with your foot. Repeat the operation until all the plants are trenched in. When this is done, dig a trench around the bed, about three feet from it, throwing the dirt on the bed, covering one foot above the top of the plants and extending two feet beyond them. Let it remain till the ground has frozen from four to six inches deep, and then cover two feet with straw, and weigh it down with frozen crusts of earth sufficient to hold it to its place. Should you use fresh manure from the stable, instead of straw, it will not require to be so thick; the object being to keep the plants as near the freezing point as possible, without letting them freeze. Be sure that the covering extends at least two feet beyond the border of the plants. Plants may be kept in a cellar, packed down in moist but not wet dirt or sand.

When plants are received in the spring, they should be immediately trenched out, just as you trench in the fall, omitting, however, the additional covering.

Preparation of the Ground.—The hedge-row should be plowed out the fall before the hedge

is to be set, and finished with a deep "dead-furrow" on the line where the plants are to be set. In the spring before setting, "back-furrow," slightly ridging the ground where the plants are to stand, and pass the barrow over it two or three times. On wet or spouty ground do not open a furrow on the line in the fall plowing, but "back furrow" each time the ground is plowed, thereby ridging up the bed where the plants are to stand. Plants set on low, wet ground, are liable to be spewed out by the first winter frost.

Handling and Assorting Plants.—As soon as the cold weather is over, remove the straw from the beds. When the frost is out of the ground, and before the buds begin to swell, the dirt should be thrown off, and the plants taken out and carefully assorted into two or three classes according to size—all doubtful plants being thrown to one side. As they are assorted they should be trenched in, each lot by itself, leaving two or three inches of the tops exposed to the sun, in which condition they may remain till they are wanted for planting. Should the plants at any time become partially dried, they can be revived by soaking in water or being buried so that each plant shall come in contact with the moist earth.

Time of Planting.—The best time to set the hedge is when the buds have started; though if the season is favorable, it will do as late as the 15th or 20th of June. The buds may be kept back for late planting by leaving the winter covering on the beds until near the time the plants are wanted for the hedge-row. Hedge set early can be re set the same season, by reserving a few of the best plants until a seasonable time in June, when those that have failed to grow can be replaced by such as you know to be good.

Number of Plants Per Rod.—Though a good hedge may be grown by using any number of plants from 16 to 50 per rod, a long series of experiments in hedging, in which the plants have been set from four to sixteen inches apart, have convinced me that about eight inches apart, or twenty-five plants to the rod, is the desired distance at which to set them in order to secure the most reliable fence. Professor J. B. Turner recommends from 12 to 16 thousand plants per mile.

Re-Setting.—If you fail in getting a perfect stand the first season, procure enough extra strong plants the second season, and fill up all gaps as soon as the buds begin to swell. Re-setting after the second season is of little use.

Transplanting.—An even, perfect stand, and uniformity of growth, in a beautiful straight line, are the things most essential to success. When the plants are taken to the field, they should be distributed first along the line about one hundred in a place, and heeled in until wanted, and never left exposed to the sun or frost. Procure a strong cord from 10 to 15 rods long, marked plainly with red yarn, eight inches, or the distance you want your plants apart. There are two methods of setting. One is, to set with the hedge-spade, (the blade of which is longer and narrower than the common spade,) which you thrust in to its full length, slanting. You then raise the handle slightly, letting a boy push the plant down at least three inches deeper than it stood in the nursery, tramping the dirt firmly to the plant with your foot. If the ground is wet, omit the tramping, as it will cause the ground to bake. The other method of setting is that known as "setting in the furrow." In either mode the line should be carefully staked, but twice the number of stakes are required in the latter. In opening the furrow, use a good strong team and good plow, in the hands of an experienced plowman. Any slight crook may be straightened with the spade. After the furrow is opened and line stretched, take a bundle of assorted plants, and placing them against the "land" side, fill in a little dirt with a hoe, pressing it to the roots, and

when the plants are all in fill up the furrow with a plow. But be very careful not to disturb the plants with the singletree, nor allow the horse to misplace them with his feet. The roots of a sound, healthy plant, when cut, present a bright, white appearance; those of a yellow dingy cast between the bark and wood, should be rejected as doubtful. A good heavy coat of mulching, applied immediately after the plants are set, will be of great advantage in keeping back the weeds, preventing injury by drouth and furnishing protection to the hedge the first winter.

Cultivation.—If well mulched, the hedge will require but little further attention the first year, otherwise it should be kept clean and free from all weeds and grass, and covered up with a furrow from each side before the ground freezes—a two-horse plow being used. In the spring uncover, and cultivate as you would a row of corn, which cultivation should be repeated every season until the hedge is five or six years old. Manure should be used in all places in the hedge-row where the soil is too thin to give a good yield of corn under good treatment.

Training the Hedge.—It has been demonstrated beyond a doubt that this clipping and shortening-in process from its infancy, (that was so universally recommended a few years ago,) is not the proper way to treat a hedge. Most hedges so treated have the appearance, when not in foliage, of standing on stilts, and make but poor barriers against hogs or sheep. Many farmers seem quite indifferent on this point, however, as hogs are not allowed the liberty of the streets; yet, would there not be much grain saved after the wheat or corn is harvested, by pasturing the stubble or stalk field with hogs? Hog-proof fences are necessary to keep hogs in if not out. All the trimming that is required while the hedge is young, is an occasional clipping of the overgrown shoots which should be done late in June, in order to check them, so as to obtain uniformity of growth.

Plashing.—This should not be done until the hedge is five or six years old, when it will be from ten to twelve feet high, and the plants from one and a half to two inches in diameter at the base. A firm, solid foundation must be had if you expect a substantial, lasting fence; and if plashed while the plants are little more than switches, this will not be had. Before plashing, which may be done in mild weather in winter or early spring—before the sap starts—trim in the sides of the hedge with a hedge-slasher or corn-knife, to two feet in width. With a light, sharp hatchet, cut the plant about half off at the collar, or at the yellow bark. Be careful to cut low. Begin at one end, pressing back the plants as you cut them, leaving about every fifth or sixth plant. Cut it off three or four feet high; weave others down in them, pressing down so that they will not raise up. Be careful not to back or cut the plants any deeper than necessary to prevent them from raising up. When through, gather and burn all brush, unless it is needed to patch up old fences, for which it answers an excellent purpose. A hedge thus treated will throw up numerous shoots from the stump and along the trunk, which, with the part laid down, will make a perfect net-work of thorns. Many of the unsightly brush-rows, designed for hedges when set, may be made passable fences by the above treatment.

After-Training.—The hedge should be trimmed twice annually—in the fall or early spring, and last of June. Mr. D. Oliver, of Carthage, Ill., has invented a horse-power hedge trimmer, which promises to do this work well, with little trouble and expense.

Gophers.—Farmers living between the Mississippi and Illinois rivers, and other localities where the Gopher is unknown, have but little or no excuse for gaps in their hedges. It is truly discouraging, when you have taken all possible pains to secure a perfect stand and

good growth the first season, to find late in the fall that the Gophers have cut off a fourth or even a third of your plants, a few inches under the surface, which they often do. It is almost impossible to fill up gaps thus made, unless you first trap the Gophers, as they will continue to take the re-plants year after year. To trap the Gopher, use the common rat steel-trap in his underground track, a little below the bottom of it, and slightly covering it.

Book Farming—What is It?

It is simply the best farming put in books—your's reader, if it is the best. A fool cannot write a book; an able man must do it—not a man of mere accomplishments or learning—but one versed in the business he writes upon. It is thus that we have books by the best men in all the departments. These make our literature—and to be opposed to them, is to be arrayed against knowledge, against schools and newspapers. What is thought of the man who opposes education? And what is education, but to learn to know a thing? If the prejudiced reader (prejudiced against book farming) knows how to trim his vine, he is the man, if he has words for it, to write a book on the subject—the very man we want, for we are after facts, after the best mode? And yet this would be called "book farming." It is mere prejudice, depend upon it.

But, there is one evil, which gives rise to this very prejudice: bad books are foisted on the public. These are read—and they lead in to error; and forthwith good and bad are condemned.

Our best men certainly are not the fools.—Our ablest men, who lead in their departments, are men qualified, if any, to impart instruction. Shall we heed them? or shall we follow after our own half-formed, inexperienced notions?—We have our prejudices, and they make us believe we are right, without consulting the facts in the case.

LICE ON FOWLS.—*Ed. Rural World*; Please inform me how to prevent and destroy vermin in the hen-house. A. H.

REPLY.—Strict cleanliness about the roosts and nests will always prevent hens from becoming lousy. The droppings under the hens should be removed frequently, the nests often renewed, and air-slaked lime and ashes scattered around the floors, boxes and roosts. Boxes of dry ashes and lime should always be kept under cover where the fowls can have constant access to them, that they may wallow in at pleasure. Where they have become lousy, the roosts should be thoroughly swept and cleaned, the straw and litter from the nests entirely removed, and the wood work and roost poles of the house white-washed with fresh slaked lime, into which a quantity of sulphur or tobacco has been mixed. A day or two before this operation, the fowls should be fed with coarse corn meal wet with milk or water into which a quantity of sulphur has been mixed. Feed with this several days, and repeat again at intervals of three or four days, and continue in this way until all the nits have been hatched, when the insects will drop off and leave the fowls.

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RATS.—*Ed. Rural World*—Will some of your readers please inform me through your journal if there are any means to banish rats, they are getting more numerous and destructive every day. I have cats, traps and poison at work, and kill a great many, but they are no more than a drop out of the ocean. T. W. W. Eudora, Kansas.

REPLY.—Our correspondent seems to be in a bad fix. We have always found that cats kept in sufficient numbers will make rats scarce—provided they are not fed so well as to become lary. All rat supplies—in the shape of refuse animal or vegetable matter—should be destroyed. It is said, that chloride of lime will drive rats away from any place infested with them. Scatter it about their feeding places, and wrap some in a piece of muslin and put into their holes. Slightly dampen with water, which will cause it to emit an offensive gas to rats.—If chloride of lime is moistened with muriatic acid, and placed in a drain, vault or cellar, and closed from the air a little while, the rats will depart, because it will be death to remain.

GRASSHOPPERS.—*Ed. Rural World*: I have spent considerable money and time the last few years, to raise a good orchard, and from what I see now, I am afraid the grasshoppers will eat the bark of the young apple, pear and cherry trees, before they leave us. I would like to know what to use as a preventive—and whether whale oil soap, soft soap, coal tar, or any such article, would be injurious, if used, to the tree. I believe any of these applications would keep the grasshoppers away. W. H. Leavenworth, Kan.

REPLY.—Whale oil soap or soft soap will not injure, but benefit the trees. Tar would be injurious, as it would close the pores of the bark.

THE FARMER'S ACCOUNTANT.

The above is the title of a new work by C. O. & F. Perkins. We have received a copy through Mr. F. Perkins, of Chester, Mass., and we give his statement in regard to its value to the farmer. He says:

"This is the result of many years' experience in keeping farm accounts, and has been found the most convenient. It contains an index, reasons for keeping systematic accounts; rules, tables and measures, which every farmer ought to have; instructions for filling out the blank portion, which is repeated three times, consequently making the book last three years.

The principal thing claimed for this book is, its simplicity—any person that can read and write the English language, can keep it. We have all through the book avoided as much as possible the terms Dr. & Cr., that so often perplex the person unused to keeping accounts.

It sells for \$3.50. We have in press a smaller book, designed for small farmers, which will sell for about \$2.50. Also one for a year for \$1."

We have here given our readers a brief summary of the authors' design, and would say in conclusion, that no farmer can hope to prosecute his profession with success without some regular system of accounts. He who does not keep a record of his business is groping his way in the dark, and must inevitably fall into the ditch of destruction.

Horse Department.



BREAKING COLTS.

One of our subscribers desires us to give the best system of breaking colts to harness. The above cut illustrates an excellent plan, particularly for colts that are vicious and intractable. The apparatus can be cheaply made. One can take the wheels of his wagon to use upon it.

It will be seen that the colt can neither bite, kick, lie down, rear nor back. The straps and bars hold him up and hold him down, and prevent him from going to one side or the other. It is well to have one steady horse in the machine to aid in breaking the colt.

But no colt should be put in this machine, nor hitched to anything, till it is handled more or less and taught that you are not going to hurt it. Kindness, gentleness and patience are the important requisites in breaking horses.—The colt should be rubbed all over, fed out of the hand, dallied with, and made to know that you are its friend. The harness should be put on, and he should be led and driven about till he gets used to it. Practice this two or three days, and then put him in the Colt Breaker, and you can soon hitch him to anything. A little more care, patience and judgment in breaking colts, and we should have fewer balky, kicking and runaway horses.

RHEUMATISM IN HORSES.

The treatment of this disease of rheumatism must be based on the tonic principle; all exhausting remedies, such as bleeding or purgatives, must be abandoned. Debility to some extent is generally present, and must be combated by tonics and liberal diet; alkalies are valuable agents in these cases, and counter-irritation with the ointment of the biniodide of mercury may be estimated as the principal of remedial measures.

All kinds of stimulating liniments have been tried in the acute form of the disease without any marked benefit but a good blister repeated once or twice has generally been found to remove the disease, and secure the limb against a second attack. In the chronic form of the affection, treatment has generally been attended with only a partial success, and there is always a probability of a return of the lameness. Various internal remedies have been at different times exhibited, and, among others, colchicum, both the extract and the powder of the dried "corn," without a result sufficiently satisfactory to warrant their recommendation.

The most beneficial system appears to be the administration of alkalies (such as carbonate of potash) in the water or food, nutritious diet,

and blisters to the affected part, avoiding all violent purgatives or other remedies which tend to add to the debility upon which, in all probability, the malady depends.—[London Field.

A SHORT SERMON ON HORSES.

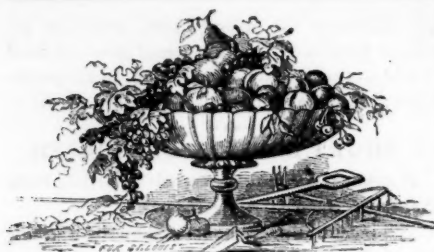
We take the following sensible article from the *Lower Canada Agriculturist*:

The recent improvements in American architecture have not reached the stables to the extent that could be desired. Brown stone fronts, high ceilings, marble mantle-pieces, costly furnaces for warming and ventilating the dwelling, may please the eye, and promote the health and comfort of the occupants, while the valuable horses of the proprietor are suffering from the poorly constructed and poorly ventilated stable.

The fault often lies in two directions. The stable may be too tight, or too open. A horse needs light as well as air, and suitable warmth and food—the vegetable structure hardly needs light more than he does. Pure air is essential. His blood cannot become purified while the air which inflates his lungs is full of foul gasses from fermenting manures.

Nor is it enough to keep the stalls clean, if they are so tight that the horse is obliged to breathe his own breath over and over. Digestion is interfered with, and all the functions of life are impeded. Lazy grooms declare that a close, warm stable, helps to make a horse's coat fine and glossy in winter as well as in summer. But in winter such a coat is not to be desired. Nature provides the animal with longer hair and more of it to defend him from the cold. If the horse is well groomed and blanketed, his hair will be smooth and glossy enough all the year round. The indolent groom ought himself to be shut up for twenty-four hours in the hot, steaming air in which he would confine his master's horse, and see how he would like it. Open the doors of such a stable in the morning, where several horses are kept, and the hot air and the hartshorn are almost sufficient to knock a man down. What wonder then that horses so used, should suffer from inflamed eyes, coughs, glanders, and other ailments! The wonder is, that they bear the abuse so long and so well.

Now, the "improvement" to our sermon is simply this: Ventilate the stables. Ventilate both in winter and in summer. The outer air should be brought in at certain places near the floor, but not in the immediate neighborhood of the horse, so as to cause hurtful drafts of wind directly upon him. Impure air must be ejected, as well as pure air brought in. This can be done in summer very well by leaving several windows open in different parts of the barn. But a better way is to insert ventilators in the highest part of the building, into which ventilators (square wooden tubes) shall lead from the stalls, and which can be opened or closed at pleasure. These ventilators should be covered with a cap, to prevent downward currents and the beating in of rain. By this plan the downward rain is carried off directly from the stall without mixing with the hay in the loft.



HORTICULTURAL.

[Written for Colman's Rural World.]
MANURING THE GRAPE.

Much manure is not wanted generally for grapes. Some kinds require it, at least a rich soil. The Delaware is, notoriously, one of these. But grapes do best in an ordinarily rich soil, well-drained, and well-cultivated. If the sub-soil is porous—that will do; if not, if hard, it must be loosened. This is necessary to improved growth. Good crops are grown yearly on soil simply plowed, and never drained or sub-soiled. This is, indeed, the common practice, the country over. It is only the more extensive raisers of grapes that give more attention to the subject. It is with grapes as with other fruits—care will improve them.

Clay is an excellent ingredient in the soil for grapes as well as other crops—as witness the success at Herman, and around St. Louis. The advantage here is, that the clay is well distributed through the soil, and well pulverized. Lime also has an effect: it is an alkali, and corrects many defects of the soil. It sweetens it for the grape; acts upon the clay favorably, and has a durable, good effect.

Of a similar nature with clay and lime, are—rotted chips, leaf mould, and vegetable matter generally. Some hold to leaves alone as sufficient and healthy for grapes—nature's way of manuring. It may be the best in the long run, as may slight pruning; but it is not best for the greatest crops and the best fruit;—it is an advantage to grow large yields for a less length of time, and then re-plant. Get all you can. Large crops and improved fruit are the demand. We doubt whether leaf mold alone will be sufficient, at least in light soils. Where soil is already good, it will no doubt do to dress with vegetable manure alone. We, however, in all cases, prefer a sufficiency of clay and lime, with an otherwise fair soil, to any one manure.

We have known a barrow-ful of night soil to add amazingly to the growth and crop of a grape vine. The effect was seen for years, and is still in full force. Besides, it gets the slops from the kitchen, and the soil itself is a rich, mellow, alluvial deposit, with good natural drainage. We have never seen grapes equal in product to this vine. The grape is sweet and relishable for an Isabella. It is not perceived that the flavor is hurt any. We were surprised at the result of this manuring. The vine before had done well; but the owner, not satisfied, wished to "beat everything,"—and he did. I noticed that the laterals had each from four to five clusters of the finest size. The vine latter-

ly was closely summer-pruned, which improved the crop.

Other vines in the immediate neighborhood, some a few rods distant, with equal facilities of soil and kitchen wash, have not succeeded so well.

Has the manure in this case benefitted the vine? The conclusion is almost irresistible that it has. But in other cases we know it has not had this effect. But the Isabella is a gross feeder, and will thrive under good treatment.

We are persuaded that locality has something to do with the vines above alluded to.—The one first mentioned is favorably situated in all respects, well guarded from the cold, with an open exposure to the south.

We have seen remarkable crops on ordinary unmanured soil. The vine was less thrifty, the clusters less large—but healthy all—well ripened and well-flavored.

In all our observations we have come to the conclusion that, with good locality, well drained, moderately rich soil, and proper (rather close) pruning, manure (especially vegetable) can be used to advantage. We think as a whole, take the grapes as they run, manure will prove a benefit—vegetable and animal mixed, the vegetable predominating. We manure freely—in rather a good soil—and find it to our advantage. We expect to count less years to our vines; but we make it up in amount and quality: nay, more—it pays best to push and get what we can. We therefore employ some manure from the barn-yard, some night-soil, some black forest mould and leaves worked into the soil, never forgetting the lime. Clay abounds sufficiently. A treatment of this kind every fall, we are persuaded is an advantage where the soil is sufficiently porous to let down the strength. Much clay will prevent this, unless in a highly pulverized state and large quantities of manure are used.

This treatment of the soil—pulverizing the surface, and mixing leaves and manure well with it, forms a protection to the roots against the severe frost, and gives an early start in the spring. We like the plan, especially when there is no trenching, so that the roots keep near the surface, and thus get the more direct benefit of the manure. W.

[Written for Colman's Rural World.]

JAPAN WHITE HONEYSUCKLE.

We have cultivated this pretty honeysuckle for a number of years past; and for several years was disposed to condemn it, as being a rank, sprawling grower, trailing close along the ground, running and rooting over everything, having withal a sort of weedy appearance, not disposed to bloom any too freely, and that it possessed no merit over, if as much as its congener, the pretty Chinese Twining or Evergreen. Subsequently, after a more extended experience and observation with it, however, we are convinced that it is a valuable variety—for it is either a variety of the Chinese, or a very closely resembling species. To prevent its trailing on the ground, all it wants is, something to climb on—and plenty of it, too. Its rapid and enormous growth renders it just the

thing to cover trellises, arbors, or pillars, in a short time, and to cover a large space if necessary. A tall column or pillar is what shows off to the best advantage. It will clamber up to the top, spread out, reach over, and droop in whorled masses of graceful profusion, covering the surface with its foliage and hiding every object beneath. As the plant attains age, it blooms freely and profusely, twice in the season, and remains in bloom a good while each time. The blossoms are borne in pairs, for a foot or more along the point of each shoot; are pure white, when first open, changing, as all honeysuckles do, to a pale buff. As the flower becomes old, it blooms like the Chinese, except in color, and is equally as fragrant, if not more strongly so.

It is, I think, more hardy than the Chinese retains its foliage as long, if not longer, and is certainly as near an evergreen as that valued kind. The foliage is a light pale green, thus differing again from its congener; and whether a variety of that, or a different species, it is very distinct, and in color of flower and foliage, rapidity of growth and hardiness, gives it quite a different appearance, though in habit the same.

I have, of late, been disposed to place it as superior to that old favorite above alluded to, but cannot yet do so; but can freely say that it forms a delightful companion to that charming kind, and that they both should have a place in every garden that has room for anything graceful, sweet and pretty. C. S.

Twelve Best Pears for Family Use.

At a late discussion on pears, by the Cambridge (Mass.) Horticultural Society, the following list was voted best for New England:

1. Doyenne d'Ete, ripe from August 1 to August 20.
2. Rostiezer, ripe from August 15 to Sept. 1.
3. Bartlett, ripe from Sept. 1 to Sept. 20.
4. Belle Lucrative, ripe from September 10 to Oct. 1.
5. Louise Bonne de Jersey, ripe from Sept. 20 to Oct. 10.
6. Sheldon, ripe from Oct. 1 to Oct. 30.
7. Seckel, ripe from Oct. 1 to Oct. 25.
8. Duchess, ripe from Oct. 20 to Nov. 25.
9. Beurre d'Anjou, ripe from Nov. 5 to Dec. 1.
10. Lawrence, ripe from Nov. 15 to Dec. 15.
11. Hovey, (Dana's,) ripe from Dec. 1 to Jan. 1.
12. Le Cure, ripe from Jan. 1 to Feb. 1.

THE BEST TRELLIS.—*Ed. Rural World.* Please inform me of the cheapest and best trellis for grape vines. I have two acres to trellis next spring and want to prepare for it beforehand. L.

ANSWER.—The best trellis is made of Cedar posts and wire. Old telegraph wire is largely used for the purpose, and which can frequently be bought low. This trellis is the cheapest in the long run. Once up, it will last a man his lifetime. It is not breaking down and going to ruin constantly. Strong posts can be put in every forty or fifty feet, and lighter ones used between them to save expense. Put up a good trellis while about it, and you will never regret it.

THE BEST MARKET FRUITS.

ED. RURAL WORLD: Will you please name the best variety of red raspberry, the best variety of black raspberry, the best variety of strawberry, the best variety of blackberry, the best variety of currant and the best variety of gooseberry, for market culture in the vicinity of St. Louis.

A YOUNG FRUIT GROWER.

REPLY—The best red raspberry now in cultivation, for either family use or market culture, is the Philadelphia. We have had it in cultivation several years, and each year's experience has demonstrated its superior hardiness, productiveness and constitutional vigor. It is likewise quite free from suckers, which, with the red raspberry, is a great objection. The St. Louis Raspberry has been the chief market variety in St. Louis—but the Philadelphia has superior merits, and will displace it.

The best black raspberry is, the Doolittle.—It is the earliest, is productive and profitable. It succeeded in ripening by the Miami, a profitable variety, grown largely in the vicinity of Cincinnati, and quite largely latterly in the vicinity of St. Louis.

The best variety of the strawberry for market culture is Wilson's Albany, and we doubt if any variety is ever produced with as many qualifications for a market fruit. We know there are a host of new aspirants for the position of the Albany—but so far as our experience and observation have extended, they must take a back seat.

The New Rochelle (Lawton) Blackberry, so far as our experience extends, stands at the head of the list, for market culture. Other new kinds may displace it—but we very much doubt it.

The old Red Dutch Currant is hardier, stronger and more productive and profitable than any of its later rivals, and will long retain its place as the most profitable currant for market.

The same may be said of the Houghton Seedling Gooseberry. It is the only variety among those we have tested, that is worth planting for market.

PEACH CULTURE.

ED. RURAL WORLD: I very rarely see anything in the columns of your paper upon the subject of peach culture. While the apple, pear, grape, &c., receive each their full share of attention from your intelligent contributors—the peach, our most delicious fruit, is almost entirely ignored by them.

That information, as to the proper management of peach trees, is very much needed, is apparent in the neglected appearance of nearly all the peach orchards I see.

With your permission, I will endeavor to offer a few suggestions upon the management of peach trees, that may be of benefit to some of your numerous readers.

The first thing to be considered when one wishes to plant an orchard, is the location and aspect, or "exposure," as it is by a judicious selection of these, that we avoid the greatest enemy of the peach—Jack Frost.

A situation by a lake, river, or other large watercourse, is decidedly the best. If this cannot be obtained, plant your trees on the highest

ground in the immediate vicinity. It does not require so much the absolute height, as the relative height. The reason for this is: the cold atmosphere during the frosty nights of spring, so fatal to peaches, settles in the valleys, forcing the warm air generated there during the day along up the slopes of the hill to the top, keeping up a more equal temperature than exists in the valley below—which is the main object to be attained.

This is also partly secured in the exposure, which should be a northern or north-western one; but owing to the extreme cold north-west wind prevalent in some localities it is necessary to have your orchard protected on that side by a belt of timber or an adjacent hill.

The next thing to be considered is, the soil.—A sandy soil has been thought best, owing to its loose, porous, character and its superior drainage; but as a clay soil has been found to add greatly to the size and flavor of the fruit, a light clay soil, if made loose and mellow, by cultivation, and sufficiently dry by natural or artificial drainage, will be found better than a sandy one—so much so, that it will abundantly pay for the extra preparation it requires.

The trees, if you do not raise them yourself, should be obtained from the nearest reliable nursery. I would never advise any one to raise his own trees, unless intending to plant by the thousand. Varieties should extend through the season, whether planting for market or family use.

The best time, perhaps, for setting out trees is in the spring. The ground should be prepared the fall previously. A very good plan for a large orchard is, to plow deep and sub-soil a strip of ground eight or ten feet wide, (throwing open the "dead furrow," where you want each row of trees. This answers for the holes. This should be left open to the action of the frost during the winter. When you wish to plant your trees, throw in with the shovel sufficient earth to have it nearly on a level with the field—more or less, according to the nature of your land, whether wet or dry. Set the tree on this, spreading the roots well; and, putting earth in contact with the roots, fill it up two or three inches higher than it stood in the nursery, pressing it well down on the roots, as this will prevent drying out the first summer. Cut off the top of your tree within eighteen inches of the ground—and your tree is planted. When plowing time comes, throw the earth to the trees; sub-soiling again when you come to the unbroken ground between the rows.

The peach tree has, I believe, but two enemies—the yellows and the borers. The former has not yet made its appearance in the West, and planters of trees should try and not introduce it by buying Eastern trees. Of the borer, I propose to speak more fully, as the present is the season in which their depredations can be prevented to some extent.

The borer is the grub from the *Ageria exilis*—a slender, dark blue, four-winged moth, resembling in shape the wasp. It lays its eggs during the latter part of June, about the collar of the tree, or in the tender bark of the root, if it can reach it. The grub soon hatches and

commences operation by boring through the bark and eating his way around the tree or down along the larger roots, and if uninterrupted will come up to the surface of the ground the following spring, form a cocoon and in June will emerge in moth form, and proceed to multiplying its kind.

When the borer once gets into the tree, the only way to get rid of it is to follow it up, and kill it with a knife; but as this is laborious, and the tree is often injured in looking for the borer, some way of prevention would seem better. A plan I have seen tried with considerable success is, to hill up the tree in May or early June with earth to the depth of several inches. The moth is unable then to get to the soft bark; and if it succeeds in piercing the hard bark to lay its egg, the grub makes slow progress and is easily found and killed. In October, the hill should be taken away from the tree to allow the bark to harden, to be filled up again in spring after looking for any worms that may have escaped detection in the fall. By adopting this method, peach trees will be but very little damaged by the borer that annually kills thousands of trees.

I will speak about the pruning and after-culture of the peach tree in a future number.

Jefferson Co., Mo.

D.

STRAWBERRIES.

This, the first ripe fruit of the season, demands some notice. It is always desirable to see if experience has taught us any lessons, and to ask if these lessons are worthy of record.

A prominent feature in the items worthy of attention is, the Strawberry Exhibition of Claggett & Sons. The heavy rain of Monday and the morning of the Exhibition, June 10 and 11, cut down the quantity of fruit and the number of exhibitors and visitors, especially from the country. Several new varieties were exhibited, among which the Green Prolific had many admirers, which our own experience with it fully justified. The Premiums awarded were as follows:

Best collection of strawberries, to Mrs. Dr. H. E. Peebles, St. Louis Co., Mo., \$20.00
Second best, Dr. B. F. Edwards, Kirkwood, St. Louis Co., Mo., \$10.00
Best gallon, L. D. Votaw, Eureka, St. Louis Co., Mo., \$10.00
Second best, Levi Stratton, Webster Groves, St. Louis Co., Mo., \$5.00
Finest bouquet, \$5; second finest, \$3; both to J. M. Jordan, St. Louis, Mo.

We notice a mistake that, in the hurry of the moment, has gone the rounds of the city papers, that the premium was awarded to Dr. Peebles, which was not the case—it was to his lady that the premium was awarded. Upon another point there is an item to note. The public and the judges decided that the best gallon of strawberries was presented by Mrs. Dr. Peebles—the Fillmore. The best gallon of Wilson's Albany was presented by the same lady, and in justice it would seem that the best gallon should receive the premium, whether in a collection or not.

Again, the difference between an artist educa-

ted from his infancy to a profession and one who has taken up the same department from pure love, has to be taken into account, and we confess to much sympathy with those amateur exhibitors of bouquets, who were rivalled by an artist of such antecedents as are put on record in one of our dailies. We say:

"Tho' fallen from empire low,
Ye bowed to no inglorious foe."

These evils will be removed by experience. It was a noble undertaking, and fraught with valuable results.

This season's strawberry market will teach us another class of lessons. We glory in the central commercial position of St. Louis and its great advantages. We do not deny these, but point to a fact and its lesson.

Southern Illinois and the Southern portions of the Mississippi Valley generally, (and in the future increasingly,) command our market eight days before the strawberry is ripe in our vicinity. The market is full of this fruit when our first ripe berries come in, and we lose the high figures of the early crop, and get in when the market is glutted. The high price of our late fruit is cut down by full supplies of fresh fruit from points farther north, so that our central position tells on the pocket of the grower in our immediate vicinity, and will serve as a caution in the extensive planting of perishable fruit.

We see also the necessity of preconcerted action between shippers and dealers in regard to opening up new channels for fruit when the market is glutted here—and, again, to the importance of having the fruit sent to market in such packages as will admit of its being reshipped without change of package. By-and-by we will learn.

While there is cause to regret the severe disappointment and loss of many of our growers, there is one hopeful view we can take—that when we have had to sell strawberries at 5 cents a quart retail, they have been brought within the reach of hundreds of families, and have entered into their dietary, and will thus create a demand in all time to come. That which they purchased because it was cheap, in coming seasons they must purchase as a necessity.

Every cloud has a "silver lining" if we can only see it. Prudence in planting, and the adoption of measures for the prompt relief of the market, by extended commercial connections, will do much to regulate the price, and still make the strawberry profitable. A.E.

SOIL FOR GRAPES.—Dr. Kirtland and others, at the Cleveland Grape Growers' Association, remarked that a clay soil was the best for grapes—that by draining the soil it improved, became friable, &c. This is done in consequence, first, of the action of the frost, and then that of the atmosphere which is admitted, raising the temperature of the ground, and thus promoting decomposition.

We believe, with the Doctor and his friends, that such soil is excellent for grapes—as indeed for almost any crop—and we know it adds to the sweetness and perfection of the fruit.

[Written for Colman's Rural World.]

ORDER IN THE GARDEN.

"Order is Heaven's first law," has been said. If it true of Heaven, there is no place on earth where it should be the ruling stature more than in the garden. Serenity, repose, comfort, ease and enjoyment, should all be combined in the uses and pleasures of the garden: and none of these can be had unless order, neatness, system and, in a measure, perfection prevail.

Let us see, if we can define in words, what is meant by order in the garden, and then look on its reverse, and see the difference.

To begin with, and in order to a proper appreciation of the subject, the garden, whether large or small, should be laid out with taste and some judgment—and by that we don't mean that any set of rules should be followed, but that there should be nothing to offend the mind through the senses in any part of it. All should be smooth, easy, flowing, graceful, so as to strike the mind with pleasure and satisfaction; we know it is difficult, often impossible, to let it kept so. Many causes, over which we have no control, will intervene to destroy our work. The climate often interferes, the winter kills some favorite tree or shrub, drouths prevail, floods come, ugly weeds protrude themselves unbidden, and a score of other troubles come to mar the scene.

But, supposing the garden to be laid out with skill, and planted and planned so as to afford all the real pleasures of a garden, and then left to take care of itself; walks and roads rugged and rough, grass unmown, trees and shrubs untrimmed, flowers left to grow at will, ugly and noisome weeds growing everywhere: such a place is an eyesore and a nuisance, offensive to the feelings of the most ordinary mind. Better it should be plowed up and turned into a corn field, for it is unworthy the name of a garden, and it is a misnomer to call it one.

But let a place, be it ever so small, be kept in order, neat, trim and tidy; the roads or walks smooth; and well kept edges, well defined; curves, regular, graceful and flowing; or straight lines, perfectly straight. The lawn should be smooth, even; grass short; and no weeds or anything but grass should grow here. The green, well-kept lawn is, of itself, as gay an object as the gayest flower bed, and should be prized equally as much. In the flower beds or borders, no grass or weeds should intrude; shrubs and trees, if not naturally growing into graceful and elegant shapes, should be made to do so by artificial training. In a word, the same system, order, care and taste, pains and labor, should be bestowed on the flower garden, that is on the finest drawing-room—each, however, by different means and in a different way. The lawn grass is the carpet of the garden, and the shrubs and flowers correspond to the pictures, statuary and books found in the library and drawing-room of the family of taste. Such a garden should be an illustration of the motto at the head of this article, and would answer the ends for which it was intended, and, as we understand the very name of garden implies.

[Written for Colman's Rural World.]

PLEASURES OF BOTANY.

BY A. FENDLER.

In the present article I propose to point out a source of enjoyment that by many of my readers may be deemed new—never before thought of—though easy of access and within the reach of all who have a small portion of their time to spare for innocent recreation. It is especially close at hand to the country resident of our yet comparatively thinly settled regions of the "Great West," where forests and prairies, hills and valleys spread out in natural beauty their thousands of sylvan and floral offerings—their varied and manifold forms of vegetation. Not only is it a source of enjoyment, but also a means of acquiring useful knowledge.

To become acquainted with the natural productions of the soil in his own immediate neighborhood and afterwards with those of the whole county he lives in, ought to be the natural desire of every intelligent person.

Ah, some will say, that may do for a few enthusiastic individuals of a peculiar turn of mind and gifted with a taste for the study of natural history, but not for the majority of us.

Now this is altogether a mistake, under which I once labored myself, and I am free to own, that until a comparatively late period of my life, I was so indifferent with regard to botanic specimens and all the less showy objects of vegetation, as to pass them by without deeming them worthy of notice, even in my wanderings through regions unexplored by botanists, and where an exceedingly rich harvest of new and rare plants soon after rewarded the labors of botanical collectors. And yet, some years later, when put upon the right track, what pleasures for years have I derived from botany, and this very day, how interested do I feel even in the meanest looking herb when new to me. How the accumulation of species for my herbarium gladdens my heart when at evening, laden with plants, I return home, unmindful of the fatigues of an arduous day's work.

For the beginner in botany there is always a pretty sure prospect of finding on every excursion some, and perhaps many, novelties. With every strange looking plant he finds his curiosity is excited and his expectations raised by the possibility of its being at least a rare one, if not a new one to science. Every week of the growing season brings him a fresh supply of different species; and different localities, especially when different in elevation, soil and moisture, present him with different forms.

There is one feature in the collecting of plants recommending itself to the naturalist, that is: whenever he spies a desirable specimen of the vegetable kingdom, it cannot escape his hands; and then there is no struggle in self-defence, no agony of death, as in animals.

One of the most important auxiliaries in the study of botany is an *Herbarium*. If you have an herbarium—that is, a collection of well prepared and systematically arranged specimens of dried plants, with their natural bright colors preserved (may be for years), and with their extended leaves and flowers lightly tacked with

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gum Arabic to sheets of white or buff colored, stiff paper, with the popular as well as the proper botanical name, the locality where found, and the date when gathered, affixed to each plant—you have what is termed a *hortus siccus*, a garden of exsiccated plants.

In reviewing the same by turning over sheet after sheet, like the leaves of a book, you will have intellectual enjoyment at any time, but especially in dreary winter when frost binds streams—when fields and lawns look white—the forest bare of leaves—out-doors the tempest howls, and roars and sweeps with icy blasts the snow in towering drifts. Then snugly seated by your fireside, you have it in your power to bring to view any or all of the numerous representatives of your state's or county's vegetation, which once were scattered far and wide. Now they recall to mind each sunny nook, each rippling little stream, each shady woodland path, "Where sunbeams, stealing through the waving trees glance from the leaves that tremble in the breeze," Where you first rescued from oblivion the little pets now before you.

And, when once fairly initiated into your new vocation, with what joyous hopes will you thenceforth watch the advancing step of coming spring—how eager to welcome each floweret as it begins to lift its tiny head above the chilly soil. How will you long for the time when the season smiles again, and when with easy heart you may go forth on your botanical excursions, wandering and roaming freely over hill and dale, in quest of new acquaintances of Flora's gaudy children.

In such pursuits as these, the oppressed bosom and the care-worn heart may find relief. For to her faithful pupils nature is always ready to impart a soothing balm to mitigate their grief,

"And lull them, cradled in her loving arm,
With melodies of streams, of lowing herds,
Of humming branches, and the voice of birds."

And in after years, when poetry, and hope, and gay young life, have fled from the majority of men, in their chilly and cheerless walks of mistaken aspirations, the botanist will find in the sight of his herbarium—in the thousand flowering plants he gladly culled in years long past—a never-failing means to touch his memory as if with magic hand, and transfer him at once to long forgotten localities and sceneries. Old associations, ever dear to him, will crowd upon his mind and awaken sentiments of pure and true affection. His care-worn brow will brighten once more, his heavy tread grow light, the fires of youth and enthusiasm kindle again in his eye—"the light of other days" is upon him. He need not exclaim in vain: "Bring me back the beautiful past, bring me back the flowers I once have culled!" For they are within his reach, they are before him. And thus, even in old age, through the weary hours of declining life, bright moments will steal upon him, like the last lingering rays of the setting sun.

To realize all these advantages a little effort at first is needed to make you feel interested in the matter, to put you on the track. The beginning of learning is rather irksome, but after applying ourselves in earnest to the study of a

good deal of dry matter, now and then some fascinating items will heave in sight, the fog will be lifted gradually, our dormant sense of interest be awakened, and by-and-by the light of science will dawn upon us, reducing to order and easy survey an astonishingly large number of objects, each differing in shape of leaf, fruit and flower, and each having its peculiar traits of beauty and symmetry.

In a future number of this journal I will give some directions with regard to the collecting and preserving of plants for the herbarium.

WORMS.

The following explains itself:

N. J. COLMAN, Esq.—Dear Sir: The worms submitted to my inspection, and which you received from Peter Young, Mendon, Ill., were so much decayed that it is impossible accurately to determine their species. I judge, however, that they are the larvæ of the *Procris Americana*. If they are, they have 16 legs, are gregarious—that is, several feed side by side on the same leaf; are of a yellow color, with a transverse row of velvety tufts on each ring, and a few conspicuous tufts of hair at each extremity. None of these peculiarities I could determine by the remains of the specimens sent.

The *Procris Americana* is a small moth, of a blue-black color, with a saffron-colored collar, and a notched tuft on the extremity of the body. They lay their eggs in clusters of 20 or more on the lower sides of the leaves, from which the larvæ are hatched. They are found on the Virginia Creeper as well as the grape vine. The latter, perhaps, constitutes their natural food.

There is no remedy for them, but picking them off by hand. And this ought to be carefully done, as they increase very rapidly in this latitude—three or more broods appearing in the course of one summer. JOHN H. TICE.
St. Louis, Mo., June 18th.

[Written for Colman's Rural World.]

Developing Nature in Fruit Culture.

We are to follow nature: this is true, and very judicious. But we may better follow nature by directing it. Forest grapes are not what vineyard grapes are. It is because they have not been directed. Art has not taken hold of them and assisted nature—given them the proper fertility (which the best wild grapes have)—and the pruning, which we know answers a law of nature, viz., the diversion of the growth of the wood (too abundant proportionally in wild vines) into that of fruit. We know that this succeeds. We do not know, however, how long it will succeed—whether it is hurtful to the constitution of the vine (not used to it)—or whether, like the grapes of Europe, custom will establish the principle; if indeed nature does not at once, and throughout, favor the plan, give her a chance. Diseases—all of them, or most of them—cannot be attributed to pruning, or to what art may do intelligently—for the vine in its wild state is also affected. New conditions elicit new principles, or give larger development. Thus, different localities vary

the vine. In some there is greater growth of wood; in others more fruit in proportion; in others, again, disease. Some localities exhibit more hardiness; some support but a straggling life. Now this straggling life, which is common to a poor soil, in the long run of years will affect no doubt the constitution of the vine. But, put on good soil, as it is in other places, and it will thrive. So we have a chance for improvement without infringing the laws of nature. We are to abide by nature; but we may also give her a chance for larger development—for that is a part of nature. The secret is, to know what nature wants—to find her out—for without her co-operation, or rather our co-operation with her, there can nothing be done. She must grow. The principle of vegetable life is hers. It is for us to find it out, and carry it out in its various ramifications.—Hence, experiment is our aid; theory is nothing—or only as it leads to experiment. F.G.

[Reported for Colman's Rural World.]

Meramec Horticultural Society.

EUREKA, Mo., June 6th, 1867.

The 102d meeting was held in the school house. President Seymour in the chair.

It was, on motion, Resolved, That the Pear Committee act as an ad interim Committee to take notice of and report upon such subjects of a miscellaneous character as may from time to time come under their observation.

The Fruit Committee reported on the table—Strawberries, from Dr. Beale—Wilson's Albany, McAvoy and Russell. From L. D. Votaw, Cutter, of little value; Hooker; Jenny Lind, not worthy of general cultivation; McAvoy and Wilson. From J. L. Bell, Wilson and McAvoy. From G. Paul, Jenny Lind; Agriculturist, promising well. From Wm. Harris, Jucunda; very hard to get a set of plants, medium growth, not so productive, fine fruit, wants ad deserves trial; also Wilson. From J. S. Seymour, Wilson; the Wilson larger and better than any of the others.

The Flower Committee reported—Magnificent bouquets, by Mrs. Augustine, Mrs. Beale and Mrs. Seymour; also, by Mrs. Gus. Paul, Misses Janie and Laura Augustine, Laura Votaw, Katie Beale, and others whose names could not be obtained.

The Wine Committee reported samples from Ed. Augustine, Concord, No. 1, very fine; do. No. 2, of excellent quality. J. S. Seymour, Concord, very good. L. D. Votaw, Concord, light color, but good. Blackberry, by Ed. Augustine, rather too sweet. Also, by L. D. Votaw, good, with much of the flavor of the fruit.

The Chairman of the Committee called attention to the vast importance of educating a correct taste in regard to our wines. The several European countries had distinct tastes for wines, each quite different. In this country we are building up a distinct class of American wines—these must be judged by correct American tastes. The rules by which we judge of European wines, were not strictly applicable to our wines. American wines required American tastes.

Numerous insects were presented by members, among them a looper worm, that was eating up every leaf on the Houghton Seedling Gooseberry—presented by Dr. Beale. G. Paul presented samples of a tent caterpillar, found abundantly on the young Buckeye. It was remarked, that a field near Glencoe was entirely over-run by these insects—the young Buckeye and Hickory being completely defoliated.

The President announced that the Essay on "Aids in the Insect War," was not ready, but would be prepared for a future meeting.

President announced the next meeting to be held at his house, at Eureka, on the first Thursday of July. Wm. Muir, Sec.

MILDEW has been known from time immemorial, and has always been understood as having been brought on by moisture. We may, therefore, expect it to continue hereafter—worse at some seasons than others.

[Written for Colman's Rural World.]

Items in Fruit Culture.

Late summer pruning of the grape vine arrests the ripening of the fruit, and the maturing of the wood.

Over-bearing of fruit always hurts the constitution of the tree. Thinning out favors it, and improves the fruit.

Dosing the soil with manure, is bad for fruit trees in general.

A wet soil rots the roots of trees, and hurts them otherwise.

Screening trees in blossoming time, from the severe winds and wet, favors their bearing. It is of great importance.

Prune grape vines early in the year—say, after they are out of blossom. But cut no large branches then—this should be done in the fall.

F.G.

[Reported for Colman's Rural World.]

FRUIT ITEMS.

There has been such an abundance of strawberries on market this season as to be within the reach of the humblest classes—fair berries having been sold as low as ten cents a quart. Our Illinois friends, seeing how little the proceeds of their shipments to St. Louis amounted to, turned their attention to Chicago, which in turn became so glutted, that the current soon drifted to our St. Louis dealers again.

Those parties who planted out largely last year, and calculated on reaping a thousand dollars an acre, must have been not a little chagrined, when they had to sell their fine Wilson's Albany at 30 cents a gallon, as we have seen them do on more occasions than one.

We know of some of the regular raisers who have been in the business many years, express a wish that they would come down to 4 cents a quart, and remain there, until those parties—strangers in the business—who have "pitched in" on the speculation principle, would get heartily sick of it.

We expect to see them as cheap or cheaper next summer, for consumers are not increasing in the same ratio as cultivators. We do not wish to discourage the cultivation of this or any other fruit—on the contrary, we would like to see every man who has a patch of ground, plant this and all other fruits, as we are satisfied he will lose nothing by so doing.

Raspberries—The first of the season appeared on market June 17th. It was the Doolittle Black Cap, and were held at \$1.50 per gallon, which very few were willing to give while the strawberry could be had for one-third the sum. Very few will be sold until the strawberries disappear.

Currants—None fully ripe on market until the 18th of June, when they were selling at \$3 per bushel. Declining since.

Cherries—This fruit seems plentiful. First lot appeared about June 8th, and were selling at 40 cents a quart, and gradually fell to 15 cts.

Gooseberries selling at \$2.50 per bushel. K.

BOUND VOLUMES FOR 1866.

Bound Volumes of the *Rural World* for 1866 for sale at this office. Price, \$3.

**EDITOR'S TABLE.****COMPLIMENTARY.**

"COLMAN'S RURAL WORLD.—This old veteran of the agricultural press has been received; formerly published monthly as the *Valley Farmer*, but now published semi-monthly. We believe this paper was first started in Burlington, Iowa, some eighteen years ago, but soon removed to St. Louis. It is a good paper. N. J. Colman, Editor. \$2 per year."

We thank the *Horticulturist and Farmer* for the above kind notice of our journal. We will however correct a small error contained therein. Our journal had its birth in St. Louis. It was never published elsewhere, except for five or six years, when we had a branch publication office in Louisville, Ky.

NOTICES OF NEW BOOKS.

MEAD'S AMERICAN GRAPE CULTURE AND WINE MAKING. Harper & Bros., New York.

We are in receipt of a copy of this work, through the politeness of E. P. Gray, St. Louis.

We cannot, at present, enter upon a detailed review, and will refer to it again—but now remark that the style and appearance of the work is most prepossessing. The paper clear and good, type large and distinct, fine margin, excellent illustrations, and a binding that fits it for the parlor table as well as the library.—There is something that is pleasant in being able to read an interesting work during the noon rest on a June day, in a partially darkened room, or in the cool of an evening, without the aid of a microscope, or the small type and crowded lines ever dimming the page to the wearied eye—and here we have it.

From a superficial examination, we will say that the external features of this volume are but in keeping with the excellence of the style, extent of the experience, correctness of the taste, and sterling honesty of the writer. It will be hailed by every one who desires to see American grape culture and wine making take its proper position in our country.

The above work may be procured at the bookstore of E. P. Gray, 503 North Fourth Street, Verandah Row, St. Louis, Mo.

THE SCIENTIFIC JOURNAL.—A weekly record of Scientific and Practical Information on Manufactures, Inventions, Mechanics, the Arts, &c. D'Epineuel & Co., Philadelphia, Pa.

This is a new claimant on the lovers of scientific information. It has a series of biographical sketches of leading inventors and useful men, which will be read with much interest, and will do much to stimulate native genius.

EPIDEMIC CHOLERA: Its Causes, Pathology, &c., and the Best Means for its Prevention and Cure. Compiled by G. Hurt, M.D., St. Louis, and published by P. M. Pinckard, 508 Pine St. St. Louis.

This is an invaluable manual, which ought to be in the hands of every head of a family, and read—nay, studied—by every one.

It is dedicated to the chief magistrates of

States and the municipal authorities of towns and cities in the Valley of the Mississippi; and we doubt if the Board of Health could succeed better in maintaining the health of the city, than by putting the mass of the people in possession of such information as this little work contains. It gives a synopsis of all that is known on the subject of a practical character, and its hints for treatment are eminently sound and simple.

HORTICULTURIST AND FARMER.—The enterprising town of Mexico, Mo., is deserving of considerable credit. We find on our table a neatly printed semi-monthly journal by the above name, published by O. A. A. Gardner, of that place, at \$1.50 per annum. We presume this is evidence that the people of Mexico, and vicinity, are of an enterprising, intelligent class, ready and willing to support such a paper. At least we hope this is the case. No farmer can read any of our agricultural papers without receiving more benefit than the journal costs. We wish prosperity to the enterprise.

BET ROOT SUGAR.

Through the kindness of the St. Louis Book and News Co., we are put in possession of this neatly got up work, written by E. G. Grant, and published by Lee & Shepard, Boston.

It treats of this new branch of rural industry very fully, giving an interesting account of the origin and progress of beet sugar manufacture, and shows its importance as a branch of national economy.

The writer discusses the culture of the beet with great clearness, giving many hints of great practical value to the farmer on the growth of the root, raising of the seed, and shows the great importance of the use of the leaves and the pulp after the sugar is extracted, in the feeding of stock on the farm. Whether the raising of beet, for its sugar, in this country, will pay—time will soon determine; but we can safely say that this well written manual can be read with profit by every farmer.

BOTS IN HORSES.—*Ed. Rural World*—In your issue of May 1st, you give a recipe for the above disease, viz., by using chloroform in mucilage. Please state the amount of chloroform necessary to constitute a dose. A. R.

Wooliam, Gasconade Co., Mo.

REPLY— $\frac{1}{2}$ to $\frac{1}{4}$ fluid ounce would probably be a dose, once a day, and watch its effect. The constitution of the horse regulates the dose.

NEW ADVERTISEMENTS.

We call especial attention to the following new Advertisements in the present issue:—

L. W. H. Wright, St. Louis, offers, fine stock for sale, viz: Morgan horses, Durham and Ayrshire cattle, improved Sheep, Chester Pigs and fancy fowls.

James Edgerton, Barnesville, Ohio, offers Chester White Pigs.

W. H. Chidester, New York, wants 20,000 Agents.

The great preacher of the world is a man's life. All pulpits are thrown into the shade by it.



[Written for Colman's Rural World.]
What a Pair of Eyes Saw!

Each village has its heart histories; each neighborhood; the remotest places; the forest; and the Pagan isles—all according to the great general law of the human heart. There is but little difference, even in detail; the same principle pervades and inspires all, so that one love account stands but for another; even incidents are nothing only so far as they are influenced by this principle.

The little affair of yesterday, is as fresh and full of meaning, as the one that happened a thousand of years ago. Mary Tansley is in precisely the same state as the Greek girl was three thousand years ago. They are alike, and they always will be, absorbing attention.

Mary was a pretty girl; she was called a doll. But a doll is not generally interesting. Mary was, and it consisted in the way she had of *lifting* her eyes. The face was dull before that—waxen: but the eyes illuminated all. And they did the work which but a few stronger spirits and higher orders of beauty could have accomplished. She was but fifteen—not large, nor very small. But there was virtue in those eyes—not so much in the eye itself—but in the mutual uprising of the two—a twin power. Stephen Landseer felt this. Every time those orbs were raised to his, they had an effect. It was known that they had an effect, because they had it upon everybody—and the probability is, Mary herself was aware of it. Mary Tansley was stolid. She had no heart—all seemed dead within her and without. She was, besides, an invalid—consumption had set its mark upon her. Why, then, should this corpse-like being have such a power? It was all the more potent in those eyes in consequence of these defects. The form had that which told against her; there hung about her slovenly habits. When her voice was fully brought out, it betrayed the coarse—a masculine substratum. This cannot be endured in a woman—but it was endured in Mary Tansley. Household duties were neglected by her; the true duties of life were shirked: but all was overlooked, because those eyes were lifted upon all. They were a family eye—in her more fully developed: more than all, they were a purely mechanical eye; as much so as the eye in a picture, a mere piece of canvas or paper. This was bad. Had there been soul, as soul it seemed, there would have been something real in the person, something perhaps to love. But, alas, the eyes were only hung on pulleys, and a mere mechanical motion gave them their effect.

Landseer was a man of taste and of under-

standing, as well as of "good standing," not only in the neighborhood, but in the church. He was rich and handsome. Mary Tansley lay seige to these qualities, and was determined to possess them—for it seemed Mary had but to choose, so strong was the siren in her.

Yesterday, they were married, to the surprise of everybody—and, yet—there was a *yet* in the thought of every one. They saw no good reason why Landseer should marry her, and yet no reason why he should not. It was a "wonder," however—and is now the only talk of the town. A few wise ones who have seen the deception—who know of the mechanical eyes, and the absolutely hollow heart—shake the head. "The future will determine," they say ominously; and then Landseer, when he has seen the enigma of the wires solved, will see it in the same light. "Unthinking man!" you will say. Say not so. Stephen Landseer did not run wilfully into this snare. He did but what you and I and others constantly do—yield to superior influences. The charms of the eye hid the defects of the body. It is so, the world over, always. We are all daily, hourly, subject to such influences—influences of all kinds—and they blind the eye. The reason is obscured: we fall into a snare, and repent afterward. This is the history of the world.—Landseer is but a case among the million—but in perhaps the most dangerous branch. F.G.

THE ETERNAL WORD.

No fragment of any army ever survived so many battles as the Bible; no citadel ever withstood so many sieges; no rock was ever battered by so many hurricanes and so swept by storms. And yet it stands. It has seen the rise and downfall of Daniel's four Empires. Assyria bequeaths a few mutilated figures to the riches of our national museum. Media and Persia, like Babylon, which they conquered, have been weighed in the balance, and long ago found wanting. Greece faintly survives in its historic fame: "Tis living Greece no more;" and the iron Rome of the Cæsars is held in precarious occupation by a feeble hand. And yet the Book that foretells all this still survives. While nations, kings, philosophers, systems, institutions have died away, the Bible engages now men's deepest thoughts, is examined by the keenest intellects, stands revered before the highest tribunals, is more read and sifted and debated, more devoutly and more vehemently assailed, more defended and more denied, industriously translated and freely given to the world, more honored and more abused, than any other book the world ever saw:

"Strange words fulfilled, and mighty works achieved, And truth in all the world; both hated and believed!"

It survives all changes, itself unchanged; it moves all minds, yet is moved by none; it sees all things decay, itself incorruptible; it sees myriads of other books engulfed in the stream of time, yet is borne along triumphantly on the wave; and will be borne along till the mystic angel shall plant his foot upon the sea, and swear by HIM that liveth forever and ever that time shall be no longer. "For all flesh is as grass, and the glory of man as the flower of grass. The grass withereth, and the flower thereof falleth away; but the word of the Lord endureth forever."

Success in any lawful pursuit can only be obtained (honestly) by unceasing vigilance, perseverance, and a firm faith in the rewards of well doing.

Eternity—Where Is It?

Is it in the early times—the past? or in the future? It is in neither: it is only in the present. And it occupies all space, everything—occupies us—now—to-day—ever. We breathe it, live in it; it is constantly with us; it will continue with us. Time is but a division of it, not interfering with it. This division is made by man, and is artificial. Truly, there is no time; only eternity. Man is but an accident in it; yet will he ever continue with it in some form.

Trusting Providence.

We sometimes doubt there is a Providence. Why should we? Does God, or Nature, or Providence, or whatever it may be that controls the world, ever err? No, not in the smallest degree. Why, then, do we doubt Providence? On the same principle that the contemporaries of Galileo doubted that philosopher, and went so far as to imprison him—imprison for what? For establishing falsehood as they thought. No doubt they thought so sincerely—but they were in error, and so are we. "The thing still runs," in the language of the philosopher, though we deny it. Though we deny Providence itself, and do it in to-to, that does not interfere the least with it. It still goes on in its way. And it will go on always; it never stands still: it cannot. It is God, in his laws, working from eternity.

By LITTLES, we gain always, from necessity: only one truth at a time can be entertained.—Multiplicity defeats itself. The world is mostly troubled by the latter: hence the lack of progress we see among the masses. The advancement of the world is done by the few, who receive truth after truth, as one receives facts in the mind to establish a mathematical principle—only facts will solve a problem; only figures accurately placed, one by one, will do a sum—and life is a sum.

To PURIFY A SINK.—In hot weather, it is almost impossible to prevent sinks becoming foul, unless some chemical preparation is used. 1 pound of copperas dissolved in 4 gallons of water, poured over a sink three or four times, will completely destroy the offensive odor. As a disinfecting agent to scatter around premises affected with any unpleasant odor, nothing is better than a mixture of four parts dry ground plaster of Paris to one part of fine charcoal, by weight. All sorts of glass vessels and other utensils may be effectually purified from offensive smells by rinsing them with charcoal powder, after the grosser impurities have been scoured off with sand and soap.

LIFE, A SCIENCE.—We are not happy, generally—not all of us. It is because we let things go at random, drifting us along in the stream of society, till we find ourselves controlled by a power that is not easy to break away from—a power that will eventually, if we change not our course by rigid, cross-grained endeavor, plunge us into the maelstrom. There is a course to be pursued, and this, like a sum, must be done in the right way (generally against our case in the start), or we shall miss of the answer, happiness.

Dissimilarity in Marriage.

A writer in the *Round Table* says well, "the surest basis for mutual attachment is difference of character, with similarity of tastes and pursuits." It is well known that the short and the tall often marry—the sprightly and the sedate, &c. It is by contrast that we see things more clearly—and the effect in consequence is more vivid; we see the qualities, not only more distinctly, but they impress themselves upon the beholder. The nearer we ourselves are approached in quality, the more common will we see it, like our own common selves; and, as familiarity is tame, we are necessarily less affected—less than when the foreign flashes itself upon us. It is this antagonism which excites and ravishes, especially as we see our own individual principles reflected. But whether this principle of contrast continues its effect, is not so clear—for this very foreign element soon becomes familiar. But it always has its effect at first sight, and until the novelty is worn away.

Religious Literature.

The *Rural New Yorker* says pertinently what should be done with our religious literature:—"First, let our thousand hymns be overhauled by a committee who know something of the universal laws of poetry, and winnowed down to about one hundred. Then let us burn all our commentaries, preserving only the original Bible, which they have buried up; and call upon learned men for their views on passages of doubtful meaning, and explanations of such ancient customs as are alluded to. Thirdly, let us get into the habit of applying to sermons precisely the same laws of logic, the same canons of criticism, by which we approve or condemn other discourses."

TESTS OF CHARACTER.

A great many admirable actions are overlooked by us, because they are so little and common. Take, for instance, the mother, who has had broken slumber, if any at all, with the nursing babe whose wants must not be disregarded; she would fain sleep awhile when the breakfast hour comes, but patiently and uncomplainingly she takes her timely seat at the table. Though exhausted and weary, she serves all with a refreshing cup of coffee or tea before she sips it herself, and often the cup is handed back to her to be re-filled before she has time to taste her own. Do you hear her complain—this weary mother—that her breakfast is cold before she has time to eat it? And this not for one, but for every morning, perhaps through the year. Do you call this a small thing? Try it, and see. O! how does woman shame us by her forbearance and fortitude in what are called little things! Ah, it is these little things which are tests of character; it is by these "little" self-denials, borne with such self-forgotten gentleness, that the humblest home is made beautiful to the eyes of angel; though we fail to see it, alas! until the chair is vacant and the hand which kept in motion all this domestic machinery is powerless and cold!

WHAT THE MERCHANTS SAY.

The merchants everywhere, who sell D. B. DeLand & Co.'s *Best Chemical Saleratus*, say, that no article ever sold gives such universal satisfaction to customers. They like to have customers pleased—especially the ladies. They know it is the "Housewife's Favorite"—that *Chemical Saleratus*. It is better than Soda.

DOMESTIC DEPARTMENT.

TO CLEAN WHITE KID GLOVES.—Stretch them on a board, and rub the soiled spots with cream of tartar or magnesia. Let them rest an hour, then take a mixture of alum and fuller's earth in powder, and rub it all over the gloves with a clean brush; and let them rest again for an hour or two. Then sweep it all off, and go over with a flannel dipped in a mixture of bran and finely powdered whiting. Let them rest another hour; brush off the powder, and you will find them clean.

TO CLEAN BED TICKS, HOWEVER BADLY SOILED.—Apply Poland starch, by rubbing it on thick, with a wet cloth. Place it in the sun. When dry, rub it in with the hands. Repeat it if necessary. The soiled part will be as clean as new.

CEMENTS.—Cements of various kinds should be kept for occasional use. Flour paste answers very well for slight purposes; if required stronger than usual, let a little glue be boiled in it, or put some powdered rosin in it. White of egg, or a solution of glue and strong gum water, are good cements. A paste made of linseed meal dries very hard, and adheres firmly. A soft cement is made of yellow wax melted with its weight of turpentine and a little Venetian red to give it color. This, when cool, is as hard as soap, and is very useful to stop up cracks, and is better to cover the corks of bottles than sealing-wax or hard cement.

The best cement for broken China or glass, is that sold under the name of diamond cement, which is colorless, and resists moisture. This is made by soaking isinglass in water till it is soft, and then dissolving it in proof spirit. Add to this a little gum-ammoiniac, or galbanum, or mastic, both dissolved in a little alcohol as possible. When the cement is to be used, it must be gently liquified by placing the phial containing it in boiling water. The phial must be well closed by a good cork, not by a glass stopper, as they may become forced. It is applied to the broken edges with a camel's hair pencil.

When the objects are not to be exposed to moisture, the white of an egg alone, or mixed with finely sifted quick-lime, will answer pretty well; shellac dissolved in water, is better.

A very strong cement for earthenware is made by boiling slices of skim-milk cheese with water into a paste, and then grinding it with quick-lime in a marble mortar, or on a slab with a muller.

TO TAKE PAINT OFF OF CLOTHS.—Rub with spirits of turpentine or spirits of wine, either will answer if the paint is but just on. But if it be allowed to harden, nothing will remove it but spirits of turpentine rubbed on with perseverance. Use a soft sponge or a soft rag.

L. W. H. Wright, BREEDER AND Shipper of MORGAN HORSES,

Thorough-bred Durham and Ayrshire Cattle, Webb, Southdown, and Improved Kentucky Sheep, Chester White Pigs, from stock imported into the State, from the celebrated drove of Mr. Thomas Wood of Chester Co., Pa.

Also, Fancy Fowls of all kinds.

Satisfaction guaranteed, or money refunded.

Address P.O. Box 3479, St. Louis, Mo.

L. W. H. WRIGHT.
Clover Hill Stock Farm, St. Louis Co., Mo. jy3m

Chester County White Pigs

We can supply a few spring pigs of this superior breed of hogs, of either sex, very fine, three and a half months old, price \$15 each, boxed and delivered to express company. Also, two very fine Boar pigs, fit for service, price \$30 each, boxed and delivered to express company. If preferable, will ship to responsible parties per express C. O. D. \$16, if ordered and satisfactory reference given.

Address all orders for pigs to JAMES EDGERTON, Barnesville, O. jy2t

20,000 Agents WANTED.

A sample sent free, with terms, for any one to clear \$25 daily, in three hours. Business entirely new, light and desirable. Can be done at home or traveling, by both male and female. No gift enterprise or humbug. Address, W. H. CHIDESTER, 266 Broadway, New York

St. Louis Wholesale Market.

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SHRYOCK & ROWLAND,

Successors to W. P. & L. R. Shryock,

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COTTON & TOBACCO FACTORS,

And Agents for the sale of Manufactured Tobacco.

210 Levee and 216 Commercial St., St. Louis.

Particular attention paid to the purchase of Plantation Supplies and General Merchandise.

JUNE 22, 1867.

Cotton—18c to 23 ¢ lb.

Tobacco—Lugs, \$2.50 to 3.60 ¢ 100 lbs.

Shipping leaf, \$7.25 to 13.00.

Manufacturing leaf, \$8.00 to 40.00.

Hemp—Hacked tow, \$125 @ 135. ¢ ton.

Dressed, \$260 @ 280.

Medium, \$125 @ 165.

Lead—\$9.00 @ 9 ¢ 100 lbs.

Hides—Dry salt, 18c @ 19.

Green 10c @ 11 ¢ lb.

Drv flint, 21c to 22 ¢ lb.

Hay—\$10.50 @ 16.00 ¢ ton.

Wheat—Spring, \$1.75 to 2.00, ¢ bush.

Winter, \$2.00 to 2.50 ¢ bus.

Corn—\$0.72 to 0.78 ¢ bush.

Oats—68c to 70 ¢ bus.

Barley—Spring, \$1.10 to 1.23.

Fall, \$1.50 @ 2.00.

Flour—Fine, \$4.00 to 5.00, ¢ bbl.

Superfine, \$7.50 to 8.00 ¢ bbl.

XX, \$ 9.00 to 11 00 ¢ bbl.

Ex. Family, \$14.00 to 16.00 ¢ bbl.

Butter—Cooking, 8c to 10; table, 15 to 20, ¢ lb.

Eggs—13 ¢, ¢ doz., shipper's count.

Beans—Navy, \$3.25 @ 4.00, ¢ bus.

Castor, \$2.00 ¢ bus.

Potatoes—\$1.00 to 1.15 ¢ bus.

Salt—per bbl. \$3.20. G. A., sack, 2.50 to 2.60

Onions—\$6.50 per bbl.

Dried Fruit—Apples, \$1.75 to 2.25 ¢ bus.

Peaches, \$3.25 to \$4.50 ¢ bus.

Cranberries—none.

Corn Brooms—\$1.50 to 3.50 per doz.

Groceries—Coffee, Rio, 23c to 25 ¢ lb.

Tea, \$1.25 to 2.00 ¢ lb.

Sugar, N. O., 13c to 14 ¢ lb.

Crushed & Refined, 16 ¢ to 18 ¢ lb.

Molasses, N.O., 65c to 90 ¢ gal.

Choice Syrups, \$1.35 to 1.70, ¢ gal.

Soap—Palm, 6 ¢ to 8 ¢ lb.

Ex. Family, 9 ¢ lb.

Castile, 14 ¢ lb.

Candles—16c to 22 ¢ lb.

Lard Oil—\$1.10 @ 1.15 ¢ gal.

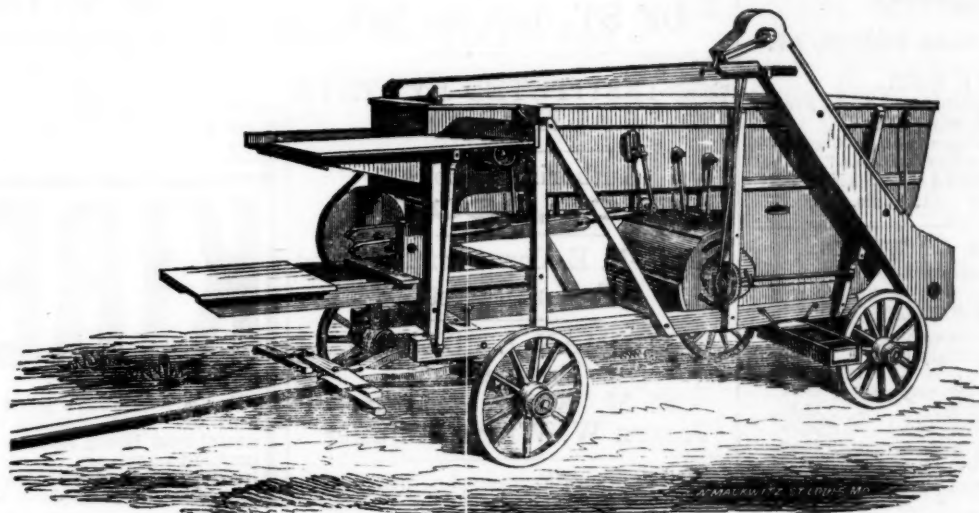
Coal Oil—50c ¢ gal.

Tallow—10 ¢ ¢ lb.

Beeswax, 30c to 35 ¢ lb.

Green Apples—Choice Jenetons—none.

COX & ROBERTS' PATENT THRESHER & CLEANER.



THIS CELEBRATED MACHINE IS MADE AND
FOR SALE BY

KINGSLANDS & FERGUSON,

OFFICE—CORNER OF SECOND AND CHERRY STREETS,

Send for Circular and Price List.

ST. LOUIS, MO.

BALL'S OHIO REAPER AND MOWER,

Made and for Sale by KINGSLANDS & FERGUSON,

OFFICE—CORNER OF SECOND AND CHERRY STREETS,

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COLMAN & SANDERS, ST. LOUIS NURSERY.



On the Olive Street Road, 5 miles
West of the Court House.

It contains the largest and choicest
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Home Grown
FRUIT TREES,

Shade Trees, Ornamental Shrubs,
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GRAPE VINES, SMALL FRUITS, &c.

IN THE WEST.

The varieties are all guaranteed to be adapted
to our soil and climate.

The City Office of the Nursery is at 97 Chesnut St.
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Address, COLMAN & SANDERS,
St. Louis, Mo.

PRICE LIST OF WINES,

Grown by

GEORGE HUSMANN, GRAPE HILL VINE-
YARDS, NEAR HERMANN, MO.

In cases of one dozen bottles each—

Norton's Virginia, first quality,	\$18.00
Concord, first quality,	12.00
Concord, second quality, very good,	10.00
Herbement, first quality,	18.00
Delaware, first quality,	24.00
Cunningham, first quality,	18.00
Cassady, first quality,	12.00
Clinton,	10.00
Hartford Prolific,	16.00
Catawba, first quality,	10.00
Catawba, second quality, very fair,	\$ 8.50

In cases, in quantities under forty gallons—

Norton's Virginia, first quality,	\$4.50 per gallon.
Concord, first quality,	3.00 "
Concord, second quality,	2.50 "
Catawba, first quality,	2.50 "
Catawba, second quality,	2.00 "
Herbement, first quality,	4.50 "

In quantities over forty gallons—

Norton's Virginia, first quality,	4.00 "
Concord, first quality,	2.50 "
Concord, second quality,	2.00 "
Catawba, first quality,	2.00 "
Catawba, second quality,	1.75 "

As these wines were all grown on my own vineyards
and carefully managed, I can warrant them to be of
superior quality, and have no doubt but they will give
general satisfaction. GEO. HUSMANN.

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NATIVE WINES.

Norton's Virginia, Concord, Herbement, Delaware,
Cunningham, Cassady, Clinton, Hartford Prolific
and Catawba, by the case, containing 1 dozen bottles
each. Norton's Virginia, Concord and Catawba, al-
so by the keg, barrel or cask.

As these wines were all grown on my own vine-
yards, and carefully managed, I can warrant them
to be of superior quality and to give general satisfac-
tion.

Sample cases, containing one dozen bottles assort-
ed of all the above varieties, will be put up if desired.
Address, GEO. HUSMANN, Hermann, Mo.

NURSERY FOR SALE.

The remaining stock and good will of the Hermann
Nursery, one of the oldest and most reliable in the
State. For further particulars, address
GEO. HUSMANN, Hermann, Mo.

FOR SALE—I offer for sale

from Ten to Fifteen young "SOUTHDOWN" Bucks,
lambled in April, to be delivered at the St. Louis Fair
next fall. Price from Twenty to Twenty-five dollars.
The lambs are from the celebrated Buck "Lexing-
ton," purchased of the Messrs. Warfields of Kentucky.
I would also dispose of a few young Ewes of the
same breed. Those wishing to purchase will please
order soon. J. W. HUGHES,
June 1 "Glen Addie," Belleville, Ill.

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ATTORNEY AT LAW,
And Real Estate Agent,
FREDERICKTOWN, MADISON CO., MO.
Gives special attention to collecting debts, paying
taxes for non-residents, probate business, &c.
Office, at the "Conservative Office."

FARMERS' INSURANCE COMPANY, OF ST. LOUIS, MO.

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AUTHORITY.

Authorized Capital,
\$100,000.00

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This Insurance Company has been organ-
ized especially for the benefit of
WESTERN FARMERS.

It will take no Fire Risks except on

**FARM
BUILDINGS,**
And Private Residences in towns
and cities, detached from other
buildings at least one
hundred feet.

It will insure the LIFE OF ALL KINDS OF

LIVE STOCK.

It will insure Horses, Mules, Cattle, &c.,

AGAINST THEFT!

It will insure the

LIVES OF PERSONS,

For the benefit of the wife and children.

**LOSSES Will be promptly
Adjusted and Paid.**

**Efficient AGENTS wanted
in every Town and County.**

**GOOD INDUCEMENTS TO LOCAL
AGENTS.**

The FARMERS' INSURANCE COMPANY
has been organized by and under the Laws of
Missouri, with all these Special Departments
of Insurance, and the custom of farmers who
desire Insurance is respectfully solicited.

All business will be attended to with prompt-
ness and despatch.

Letters addressed to the Secretary promptly
answered.

"Something New"—The American Wit, only
25 cts. a year. Address, Richardson & Collins,
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Willcox & Gibbs' Sewing Machine.

"Its seam is stronger and less
liable to rip in use or wear than
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("Judges' Report" at the "Grand Trial.")

Send for the "Report" and samples of Work,
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For a few years past the con-
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we have established an Office,
Warehouse, Sample Room, and
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SOUTH-WESTERN AGENCY at
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MO. Mr. Dick Rangan is our
General Agent in charge of the
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The Machines furnished thro'
this General Agency will be of
our own manufacture, at AU-
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improved over any machine ever
sold in the South-West. Far-
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the belief that the "KIRBY" is
only a "rigid bar" machine, but
allow us to assure you IT IS A
"FLEXIBLE BAR" MACHINE,
and also that it is the original
and very best flexible bar prin-
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We fully warrant our Machine.
It is a perfect Mower, perfect
Reaper, perfect Hand-raker, and
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BINED IN ONE! and the Cheap-
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Send for Full Descriptive Pam-
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Wit. Address, Richardson & Collins,
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CIDER PRESS SCREWS.

FIVE FEET long, 4 inches in diameter. These
powerful screws bring out one-third more juice than
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THOMPSON & CARPENTER, Poughkeepsie, N.Y.
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June 15

A Good Cooking Stove

Is one of the most necessary and desirable articles of household economy, and, if properly managed, will promote the health, comfort and happiness of every member of the family.

NO COOKING STOVES

Have ever been brought before the public which obtained so great a popularity or met with more favor than the

CHARTER OAK.

Over 100,000 of these Celebrated Cooking Stoves,

Have been sold, and they are giving entire satisfaction.

THE IMPROVED

CHARTER OAK STOVE,

WITH EXTENSION TOP,

Has but one damper, and is so simple in its construction that a child can manage it. The ovens are larger, bake more uniform, and the Stove heavier than any Cooking Stove of corresponding size ever made. The Charter Oak is made expressly for Southern and Western people, and we are confident that they will find it the Best and Cheapest Cooking Stove they can buy.

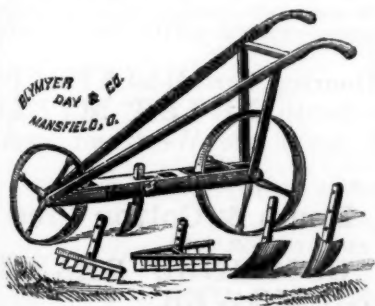
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MACHINERY Applied To HORTICULTURE

Relief at Last to the Gardener.

This is an entirely new Garden Implement. It has attachments for plowing, cultivating, harrowing, raking, cutting strawberry runners, etc., is easily propelled by hand, and enables one man to do the work of four to six. Recommended by the Cincinnati Horticultural Society, several members of which have them in use. Send for descriptive circular.

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Cincinnati, Ohio.

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"The American Wit," only 25 cents a year.
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The Lamb Family

KNITTING

Machine!

Knits **H**osiery

OF ALL SIZES,

Forming the HEEL and TOE complete,

Also, FANCY FABRICS of every variety. In fact every article of Knit Fabric in use in the family, can be manufactured on the Machine.

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MAKE YOUR OWN SOAP.

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SAPONIFIER.

Only 2 cents the pound of excellent soap if you save and use your waste grease. Only 6 or 7 cents the pound of the very best soap if you buy the grease. Directions attached to every package. All that is required is an iron kettle holding one or two gallons. For sale at every drug and grocery store.

BEWARE OF COUNTERFEITS.

Be particular in asking for PENN'A SALT MANUFACTURING COMPANY'S SAPONIFIER.

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The Subscribers have the largest Osage Orange Nursery ever grown in the world, covering nearly 300 acres closely planted, and which will yield from forty to fifty millions of plants, which they offer for sale in the

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Having some twenty years of practical experience in raising and handling plants, and also in growing hedges, they flatter themselves that they can make it to the interest of all those wishing plants, to order them. All necessary instructions to guarantee success will be furnished with each lot of plants. Your patronage solicited, with assurance that you will be honorably and liberally dealt with.

Good No. 1 plants at retail, \$3.50 per M. At wholesale and to agents we offer special inducements. Agents coming well recommended wanted in every town and county. For further particulars address,
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Keep the Largest and Best Assortment of.

PLOWS, HARROWS,

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REAPERS, MOWERS,

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Threshers, Farm Wagons,

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SAW MILLS,

LEATHER & RUBBER BELTING,

Hose, Rubber and Hemp Packing,

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Portable Farm Grist Mills,

PUMPS,

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WHEELBARROWS,

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GARDEN GRASS,

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Send for Circulars and Prices.

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Free to Bee Keepers.

Free to Bee Keepers.

"Hints to Bee Keepers,"

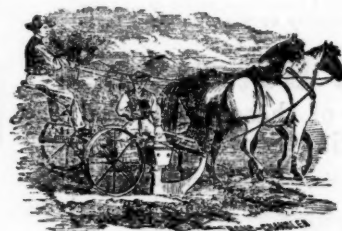
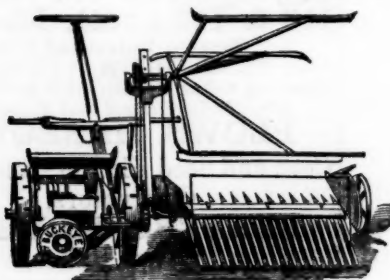
A practical pamphlet, containing much valuable information. Sent free to any address. More agents wanted to sell the Bee Keeper's Text Book, Italian Queen Bees, and the American Moveable Comb Hive.

The Improved Moveable Comb Frames are secured by Letters Patent for a term of 17 years from October 1865, and we have just secured another improvement by purchasing a general interest for Mr. Langstroth's territory in his Patent extended 7 years in 1866, being determined to respect the rights of all, and spare no expense to maintain the supremacy of the "American Hive." Send for a pamphlet without delay, and address H. A. KING & CO., Nevada, Ohio, or L. C. WAITE, Gen. Agent, St. Louis, Mo. May 15.

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WESTERN AGRICULTURAL DEPOT AND SEED STORE. WM. KOENIG & CO.,

No. 207, (Old No. 56) North Second St., St. Louis, Mo.



We are just in receipt of a large supply of

LANDRETH'S GARDEN SEEDS,

Now ready for delivery. We are prepared to fill all orders for these celebrated Seeds that we may be favored with; we can assure our patrons that the seeds purchased of us are fresh and true to name. We draw the attention of Farmers to

BROWN'S IMPROVED ILLINOIS CORN PLANTER.
DEERE'S CELEBRATED MOLINE PLOWS.

The Favorite Hawkeye Sulky Corn Cultivator.

The World Renowned BUCKEYE Reaper And Mower, which took the

Grand Gold Medal of Honor at the Great Auburn Field Trial as the best machine. We have also on hand a large supply of
Threshers, Wheat Drills, Corn Shellers, Cutting Boxes, Sugar Mills & Evaporators
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Descriptive Circulars sent gratis on application.

WM. KOENIG & CO., 207 North 2d St., St. Louis, Mo.

BARNUM & BROTHER, No. 25 South Main St., Saint Louis, Mo., Call attention to the fact
THAT THEY ARE NOW PREPARED TO FURNISH

Landreth's Celebrated Garden Seeds

The reputation of these Garden Seeds is established, and the purchaser can rely with reasonable certainty on being supplied with what our label indicates—FRESH AND GENUINE SEEDS.

Also Agents for

Straub's Wheat Flouring, Corn Meal & Feed, Potable Queen of the South GRIST MILLS
5000 of which are in use West and South.

We have also the exclusive sale in this market of
Way's Hay, Hemp & Cotton Press.

AGENTS FOR THE
CHAMPION COMBINED REAPER AND MOWER,

Which took the First Premium at the Mo. State Fair, 1866.
Also, for **VANDIVER'S MISSOURI CORN PLANTER**, which took the first Premium.

STRAUB'S. GRIST MILL, which took the First Premium. **Allen's COTTON PLANTER**

BUCKEYE SULKY CORN PLOW

Branson's Hand Loom.

And Celebrated
Rock Island Steel Plows.

Also, prepared to supply
Pitt's Threshers,
Avery & Calhoun Plows,
Corn Shellers, Cutting Boxes

Leather and Rubber Belting, Drag Saws, Horse Powers, Champion and Putnam Wringers, Missouri Family Washing Machine, and all kinds of the most approved patterns of implements and machinery.

